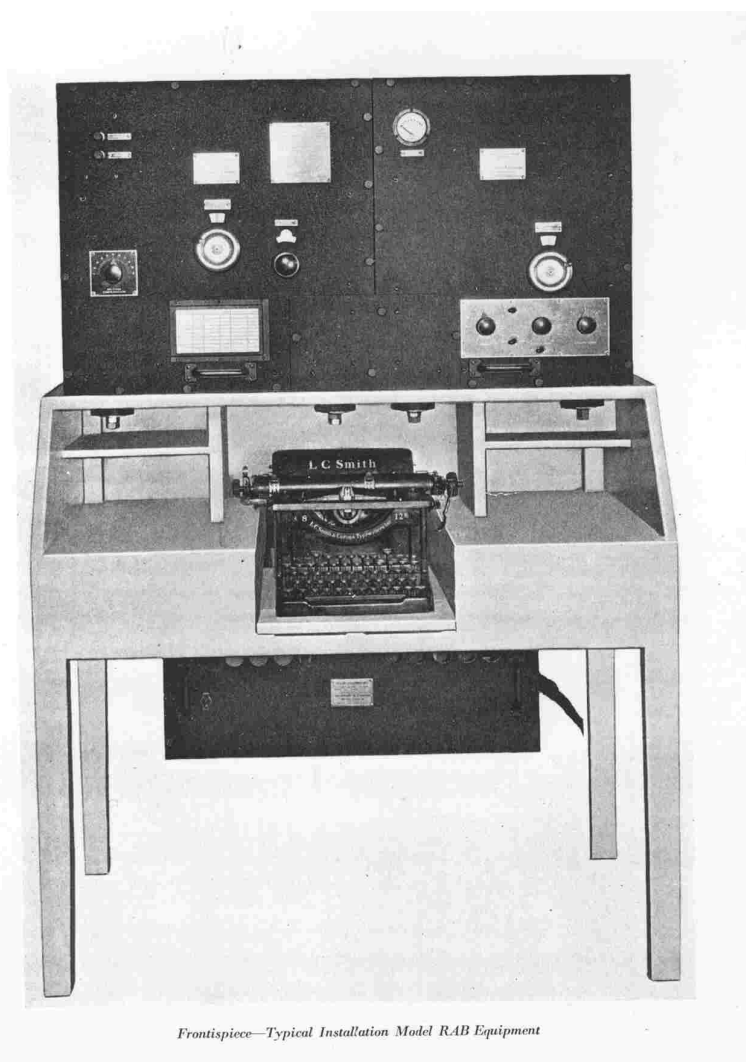


# RCA RAB Receiver

## An Exercise in No-Holds-Barred Receiver Design Ca. 1931

*This is an ongoing investigation. Any information on the history of this radio would be greatly appreciated. This information is from the instruction manual dated 30 June 1931.*

The United States Navy became one of the early adopters of long-range short-wave communications as a result of positive results obtained during fleet maneuvers in 1925. Early receiving sets were TRF-autodynes, but by the early 1930's the state of the art had progressed far enough to allow the design of a truly effective super-heterodyne for the HF range. The RAB was probably the first mass-produced short-wave superhet, and had a number of advanced features that would not appear in commercial sets for years.



Frontispiece—Typical Installation Model RAB Equipment

### Model RAB Radio Receiving Equipment

- Range 1,000 - 30,000 KC in eight band-switched ranges
- 2 Tuned RF stages for effective image rejection
- 2 IF stages with 8 tuned circuits for a modicum of selectivity.
- IF frequencies: 600, 1450, 3250, 7200 KC The higher IF's ease the image problem at higher frequencies, and widen the bandwidth to compensate for transmitter instability.
- IF frequency depends on band in use
- Remote-cutoff tubes in RF and IF for excellent manual gain control
- Regulated PS for LO and BFO
- Audio filtering for AM and CW
- Audio limiter (AVC)
- Weight: 455 lb (plus table and typewriter)

### RF Tuner CRV-4552

(rear view)

RF and oscillator coils are mounted on the top and bottom of the main chassis.

Band selection is accomplished by a sliding assembly containing the five-gang tuning capacitor and tubes. This carriage is moved by a lead screw actuated by the milling-machine-like knob on the front panel.

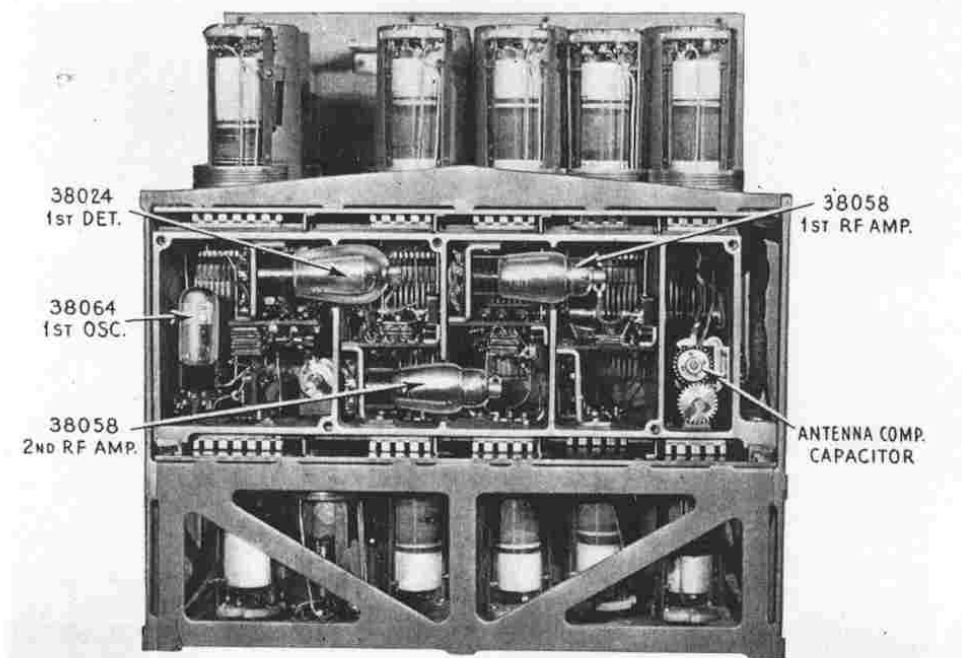


Figure 3—Radio Frequency Tuner CRV-4552  
(Rear View Chassis—Carriage Cover Plate Removed)

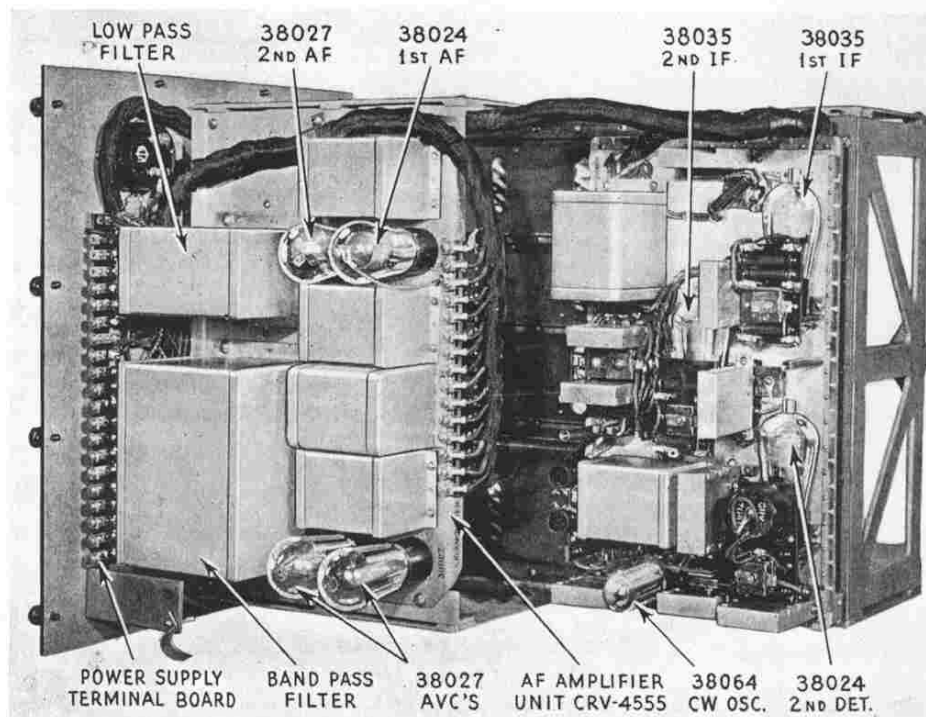


Figure 4—IF and AF Amplifier CRV-4553  
(Top View Chassis—Carriage Cover Removed)

### IF and AF Amplifier CRV-4553

Four sets of IF transformers and BFO coils are mounted on the underside. IF frequency selection is by way of a sliding chassis containing the tubes and support circuits.

[RAB\\_schematic.gif \(188KB\)](http://www.skywaves.ar88.net/commrx/RCA/RAB/RAB.html)

## **[RAB Manual \(11MB\)](#)**